

IN THE CLAIMS:

Please amend Claim 1 as follows:

1. (Currently Amended) A magnetic resonance imaging apparatus (1) comprising a gradient coil assembly (3, 4, 5) for generating gradient magnetic fields in an imaging volume, the gradient coil assembly (3, 4, 5) comprising at least three gradient coils (3, 4, 5) for generating three different gradient magnetic fields,

wherein a conductive element (71, 72, 73) is provided in close proximity to at least one of the gradient coils (3, 4, 5) in order to compensate self-induced eddy currents in the gradient coil assembly (3, 4, 5), and wherein each of the gradient coils comprise a pair of coil elements arranged in different planar axis and connected to an independently controlled power supply.

2. (Currently Amended) An apparatus as claimed in [[to]] claim 1, characterized in that the conductive element (71, 72, 73) is provided inside the at least one gradient coil (3, 4, 5).

3. (Currently Amended) An apparatus as claimed in [[to]] claim 1, characterized in that the conductive element (71, 72, 73) is provided between an inner gradient coil element and an outer gradient coil element of the at least one gradient coil (3, 4, 5).

4. (Currently Amended) An apparatus as claimed in [[to]] claim 1,
characterized in that the conductive element (71, 72, 73) comprises an
active or passive coil loop.

5. (Currently Amended) An apparatus as claimed in [[to]] claim 4,
characterized in that the loop is short-circuited in itself.

6. (Currently Amended) An apparatus as claimed in [[to]] claim 4,
characterized in that the loop is connected to a separate loop amplifier.

7. (Currently Amended) An apparatus as claimed in [[to]] claim 4,
characterized in that the loop is driven by a signal taken from the at least
one gradient coil (3, 4, 5) while using a transformer or a pickup-loop.

8. (Currently Amended) An apparatus as claimed in [[to]] claim 1,
characterized in that the conductive element (71, 72, 73) comprises a
conductive pad, in particular a conductive foil or a conductive plate.

9. (Currently Amended) An apparatus as claimed in [[to]] claim 8,
characterized in that the conductive pad is slit.

10. (Currently Amended) An apparatus as claimed in [[to]] claim 1, characterized in that conductive elements (71, 72, 73) are provided in the gradient coil assembly (3, 4, 5) such that essentially undesirable high-order behavior of the gradient coils (3, 4, 5) is suppressed and that the nature of the short term self-eddy field becomes similar to that of the gradient coils (3, 4, 5).